REMARKS

Applicants add new claims 9-24 and have not added new matter. Support in the originally filed specification for claims 9 and 17 is given in FIG. 1 and original claim 1. Support for claims 10 and 18, i.e., the memory portion storing in advance, is given on page 11, lines 22-27; claims 11 and 19, dynamically changing the range, are supported in the specification at page 11, lines 28-31; claims 12 and 20 for a color filter for each pixel are supported in the specification at page 12, lines 32-35; claims 13 and 21 for mixing or averaging pixel signals of an identical color component are supported in the specification at page 14, lines 10-12; claims 14 and 22 for outputting information for indicating a region and its resolution are supported at page 11, lines 1-3; claims 15 and 23 for an imaging device with the MOS sensor is given on page 11, lines 32-34 and in FIG. 4; claims 16 and 24 for a tap coefficient are supported at page 12, lines 11-19. Claims 1-24 are pending.

Applicants traverse the rejections for obviousness over U.S. Patent 5262871 to Wilder et al. (Wilder '871) in view of U.S. Patent 7015964 to Koizumi et al. (Koizumi '964) for claims 1-3, 6 and 7; in view of Wilder '871, Koizumi '964 and U.S. Patent 6795119 to Oda et al. (Oda '119) for claim 4; in view of Wilder '871, Koizumi '964, Oda '119 and U.S. Patent 6377304 to Saitoh (Saitoh '304) for claim 5; and over Wilder '871, Koizumi '964 and U.S. Patent 6678405 to Kondo et al. (Kondo '405) for claim 8. Applicants traverse the rejections' reliance on Wilder '871. Applicants, however, do not concede the correctness of the rejections' use of Koizumi '964, Oda '119, Saitoh '304, and/or Kondo '405.

Wilder '871 fails to teach or suggest a range specifying portion for determining the density of signal spacing, as required by claim 1 (and new claims 9 and 17). Wilder '871 discloses that with respect to any region of an image, a user can select whether the pixel signals from a particular region are read out individually or whether a plurality of adjacent pixels are read out simultaneously and the resulting signals are merged into superpixel signals. Wilder '871 teaches that all the pixels in the region are supplied with selection signals, all the pixel signals are read, and then may be subject to individual

pixel processing at a high resolution or subject to superpixel processing in which all the pixel signals are processed simultaneously for low resolution. Specifically, Wilder '871 at column 6, lines 15-39 teach a variable resolution mode wherein one pixel is read out at any one time, or where a group comprised of several pixels along a row is read out simultaneously, or where a group comprised of several pixels along a column are read out simultaneously, or where contiguous pixels of several rows and columns are read out simultaneously to constitute a superpixel. At column 9, lines 25-32, Wilder '871 states that in the superpixel mode, "one, two, four or eight particular **adjacent** column (row) conductors" can be specified, in other words, because the rows or columns are adjacent, there is no determination of the density of signal spacing, as taught and claimed by Applicants.

In addition, Wilder '871 at column 18, lines 7-32, discusses what to do when the data from some pixels are not required. Wilder '871 teach that even those the data from the pixels are not required, those pixels are still read, e.g., "[w]here only some pixels are of interest, the unimportant pixels may be read out as parts of large superpixels ... no pixel is left unread for more than one frame time," and Wilder '871 proceeds to present signal processing, computer programming, and optical integration techniques to disregard the signals from the unimportant pixels.

This is different from the present invention in which the selection signals are sent only to pixels that have been selected in accordance with the density of signal spacing specified by the range specifying portion. The result is that some of the pixels do not even output a signal or are virtually eliminated, thereby thinning out the pixel signals before processing. In fact, the claimed invention teaches a solution to the complex signal processing taught by Wilder '871 wherein all pixel signals from the imaging element are read, stored in memory and then processed which necessarily requires memories with large capacities.

Applicants claim a MOS solid-state imaging element having a range specifying portion in claim 1, or range specifying circuits as in claim 9, that determine an altered density of signal spacing, as in claim 17, for selecting pixels to be read in a range wherein the resolution is different. The altered density of the signal spacing of the selection

portion of claim 1, and the vertical and horizontal selection signals of claims 9 and 17 are given for a specified range. That is, during one reading operation, pixel signals of every pixel in a region requiring high resolution are read, while in a region requiring low resolution, some of the pixels are eliminated, thereby eliminating some of the pixel signals. In this way, a MOS solid state imaging element may have a small memory and still be capable of outputting images with different resolutions in desired regions without lowering the frame rate.

Claims 2-8, 10-16, and 18-24 are allowable at least in part by their dependence on claims 1, 9, and 17, respectively. Applicants further assert that Koizumi '964, Oda '119, Saitoh '304, and Kondo '405 do not supplement the disclosure of Wilder '871 to teach that MOS solid-state imaging element that determines the density of signal spacing. Applicants again do not concede the correctness of the rejections of these claims.

Applicants request the Examiner to reconsider the rejection of claims 1-8 and examine new claims 9-24 in view of the remarks above. If there are any outstanding issues that can easily be resolved, the Examiner is invited to telephone the primary attorney, Douglas P. Mueller, at 612.455.3804.

Please charge Deposit Account No. 50-3478 in the amount of $200.00 for excess claim fees under 37 CFR §1.16(i).

Respectfully submitted,

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